

Appl. No. : 10/807,643
Filed : March 23, 2004

AMENDMENTS TO THE CLAIMS

1.-22. (Cancelled)

23. (Currently Amended) A prosthesis for placement at an os opening from a main body lumen to a branch body lumen; the main body lumen having a main vessel wall with a portion of the main vessel wall opposing the os, said prosthesis comprising: a radially expandible scaffold having at least a first wall pattern; and at least two circumferential anchors extending axially from an end of the scaffold, said anchors having sufficient length to extend into and expandably circumscribe the main vessel wall and reach the portion of the main vessel wall opposing the os when the scaffold is implanted in the branch lumen with said one end adjacent the os, said prosthesis additionally having a region with a second wall pattern that is different from the first wall pattern, said second wall pattern permitting the anchors to both bend and rotate relative to the prosthesis, such that a flow path is maintained in the main body lumen between the anchors and beyond the os opening and wherein the anchors have an axial length which is at least 1.5 times the width of the scaffold prior to radial expansion.

24. (Currently Amended) [[A]]The prosthesis as in of Claim 23, comprising at least three circumferential anchors extending axially from the end of the scaffold.

25. (Cancelled)

26. (Cancelled)

27. (Currently Amended) [[A]]The prosthesis as in of Claim 23, wherein the scaffold comprises a plurality of axially adjacent cells.

28. (Currently Amended) [[A]]The prosthesis as in of Claim 23, wherein the circumferential anchors are all congruent.

29. (Currently Amended) [[A]]The prosthesis as in of Claim 23, wherein the circumferential anchors will radially expand when the scaffold is radially expanded.

30. (Currently Amended) [[A]]The prosthesis as in of Claim 23, further comprising a radiopaque marker at or near the region with the second wall pattern.

31. (Currently Amended) [[A]]The prosthesis as in of Claim 23, mounted on a balloon wherein the balloon has a radiopaque marker aligned with the region between the scaffold and the circumferential anchors.

32. **(Currently Amended)** A method for deploying a prosthesis across an Os opening from a main lumen to a branch lumen, the main body lumen having a main vessel wall with a portion of the main vessel wall opposing the os, said method comprising: positioning a first prosthesis so that a scaffold lies within the branch lumen and at least two circumferential anchors extend from the scaffold and into the main lumen; radially expanding the scaffold to implant said scaffold in the branch lumen; circumferentially deforming the anchors such that at least one of said anchors bends and rotates relative to the prosthesis, and has sufficient length to reach the portion of the main vessel wall opposing the os, said deforming causing the anchors to circumscribe at least a portion of the main lumen wall and open a passage through between the anchors; and deploying a second prosthesis within the passage through between the anchors, and wherein the anchors have an axial length which is at least 1.5 times the width of the scaffold prior to radial expansion.

33. **(Currently Amended)** [[A]]The method as in of Claim 32, wherein at least three circumferential anchors extend into the main lumen.

34. **(Currently Amended)** [[A]]The method as in of Claim 32, wherein positioning the first prosthesis comprises aligning a visible marker on at least one of the prosthesis and a delivery balloon with the Os.

35. **(Currently Amended)** [[A]]The method as in of Claim 32, wherein the lumens are blood vessels.

36. **(Currently Amended)** [[A]]The method as in of Claim 32, wherein the scaffold is expanded with a balloon expanded within the scaffold.

37. **(Currently Amended)** [[A]]The method as in of Claim 36, wherein the anchors are deformed by expanding a balloon positioned transversely through between the anchors.

38. **(Currently Amended)** [[A]]The method as in of Claim 37, wherein the scaffold and anchors are expanded and deformed by the same balloon.

39. **(Currently Amended)** [[A]]The method as in of Claim 37, wherein the scaffold and anchors are expanded and deformed by different balloons.

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40. (Currently Amended) [[A]]The method as in of Claim 32, wherein the second prosthesis is deployed by a balloon catheter exchanged over a guidewire pre-positioned for deformation of the anchors.

41. (Currently Amended) [[A]]The method as in of Claim 32, wherein the anchors are deformed by deployment of the second prosthesis.

42. (Currently Amended) [[A]]The method as in of Claim 32, wherein the deployed second prosthesis supports the anchors over their lengths from the Os ~~ever~~ along the main lumen wall.

43. (Currently Amended) [[A]]The prosthesis as in of Claim 23, mounted on a balloon catheter.

44. (Currently Amended) [[A]]The prosthesis as in of Claim 23, wherein the anchors have an axial length of at least 6 mm.

45. (Currently Amended) [[A]]The prosthesis as in of Claim 23, comprising at least five anchors.

46. (Currently Amended) A prosthesis for placement at an os opening from a main body lumen to a branch body lumen, the main body lumen having a main vessel wall with a portion of the main vessel wall opposing the os, said prosthesis comprising: a one piece body including a radially expandable scaffold having at least a first wall pattern; and at least one anchor extending from an end of the scaffold, said anchor having a length sufficient to circumscribe the main vessel wall and reach the portion of the main vessel wall opposing the os when the scaffold is implanted in the branch lumen with said one end adjacent the os, and wherein the anchors have an axial length which is at least 1.5 times the width of the scaffold prior to radial expansion.

47. (Currently Amended) [[A]]The prosthesis as in of Claim 46, wherein the anchor extends helically from the scaffold.

48. (Currently Amended) [[A]]The prosthesis as in of Claim 46, wherein the anchor has a length of at least 6 mm.

49. (Currently Amended) [[A]]The prosthesis as in of Claim 46, comprising at least three anchors.

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50. (Currently Amended) [[A]]The prosthesis as in of Claim 46, comprising at least five anchors.

51. (Currently Amended) [[A]]The prosthesis as in of Claim 48, comprising at least three anchors.

52. (Currently Amended) [[A]]The prosthesis as in of Claim 47, additionally comprising a radiopaque marker.

53. (Currently Amended) [[A]]The prosthesis as in of Claim 46, additionally comprising a radiopaque marker.

54. (Currently Amended) [[A]]The prosthesis as in of Claim 46, mounted on a balloon catheter.

55. (Currently Amended) [[A]]The prosthesis as in of Claim 47, mounted on a balloon catheter.

56. (Currently Amended) A method for deploying a prosthesis across an Os opening from a main lumen to a branch lumen, the main body lumen having a main vessel wall with a portion of the main vessel wall opposing the os, said method comprising: providing a first prosthesis having a scaffold and at least two anchors; positioning [[a]]the first prosthesis so that [[a]]the scaffold lies within the branch lumen and the at least two anchors extend into the main lumen; radially expanding the scaffold to implant said scaffold in the branch lumen; circumferentially deforming the anchors such that at least one of said anchors extends along the main vessel wall a sufficient distance to reach the portion of the main vessel wall opposing the os.

57. (Previously Presented) A method of positioning a prosthesis across the ostium opening between a main vessel and a branch vessel, the main vessel extending in both an upstream direction and a downstream direction from the ostium, comprising the steps of:

providing a radially expandable scaffold, having a first end and a second end and at least three anchors extending from the first end; and

positioning the prosthesis such that the scaffold is within the branch vessel and the anchors extend along the wall of the main vessel and all point in an upstream direction.

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58. (Currently Amended) [[A]]The method as in of Claim 57, comprising positioning the scaffold in the branch vessel using a first balloon catheter.

59. (Currently Amended) [[A]]The method as in of Claim 58, comprising positioning the anchors against the wall of the main vessel using the first balloon catheter.

60. (Currently Amended) [[A]]The method as in of Claim 58, comprising positioning the anchors against the wall of the main vessel using a second balloon catheter.

61. (Currently Amended) [[A]]The method as in of Claim 57, comprising entrapping the anchors against the wall of the main vessel using a main vessel stent.